

Remarks/Arguments

Claims 18 and 21-25 remain pending in the Application. Re-examination and reconsideration is requested.

As an initial matter, independent claim 18 was previously rejected as being unpatentable over Gill et al. (U.S.P. No. 5,124,368) in view of JP 02-143842. In the present Office Action mailed of July 26, 2006, the Examiner has indicated that the arguments presented in the previous amendment (A) were considered moot, in view of a new ground(s) for rejection. The application is now rejected under 35 U.S.C. 103(a) as being unpatentable over Hus et al. (U.S.P. No. 6,926,856) in view of JP 02-143842.

Claim 18 has been amended to recite “[a]pplying a liquid polyurethane dispersion without frothing as a backing layer to said cloth, wherein said polyurethane backing layer is applied and adhered to the cloth without the use of adhesives or flame lamination.” Support may be found at page 8 lines 16-19 which recite “[a]lternatively, the polyurethane dispersion may be applied to the backside of the cloth without frothing to provide a higher density, less permeable back coating. This then provides a more preferred cloth material for “shoot-behind”, high pressure molding procedures, such as injection molding.”

The present invention is directed at a method for forming a trim panel comprising (a) supplying a cloth, (b) applying a polyurethane dispersion without frothing as a backing layer to the cloth, wherein the polyurethane backing layer is applied and adhered to the cloth without the use of adhesives or flame lamination and (c) forming a molded plastic substrate using the injection molding process on the polyurethane dispersion without the use of a barrier film

applied to said polyurethane backing layer of the cloth wherein the backing layer does not allow strike-through of the cloth by the injection molded plastic substrate.

Hus et al. appears to be directed at a fabric-laminated plastic part where the fabric edges are covered with a second plastic component that adheres both to the fabric and to the first plastic material. A first plastic substrate component is prepared with an adhered fabric surface area and then the edges of the fabric are overlapped by a second molded-on, plastic edge-covering component. As the Examiner admits at page 3 of the Office Action mailed July 26, 2006, Hus et al. ('856) do not teach that said polyurethane backing is a polyurethane dispersion that is applied without the use of adhesives or flame lamination. Hus et al., in fact, details that '[b]onding of the backing material to the fabric can be achieved by flame lamination, adhesive bonding, electromagnetic radiation bonding, or thermally initiated adhesive such as Dow Adhesive Film.' (See '856 at column 7 lines 36-39.) Thus, applying **a polyurethane dispersion** as a backing layer directly to the cloth, wherein the polyurethane backing layer is applied and adhered to the cloth without the use of adhesives or flame lamination is not contemplated nor considered as a viable alternative.

Turning now to the secondary reference of JP 02-143842, this disclosure appears to be directed at applying a filled resin dispersion of polyurethane foamed with a mixer (which would necessarily produce a froth) to a surface sheet to form a cushioning/vibration damping panel having high vibration damping properties by making use of neither, adhesive agent nor nonwoven fabric, by a method wherein a polyurethane dispersion with which a powdery body is mixed is applied directly to a surface sheet. The reference is not directed at forming a trim panel but rather forming a damping panel comprising a variety of fillers (mica, talc, silica, alumina)

dispersed in a resin which is applied to a surface sheet (not a cloth) of a ligneous or high-molecular weight material. The reference is silent as to injection molding a plastic molded substrate behind said dispersion layer without the use of barrier film (independent claim 18). Further, JP-02 143842 is not concerned with strikethrough of a cloth from a substrate layer, as there is no substrate layer. JP-02 142842 is concerned with adhesion of a filled resin (superior in adhesion) to a surface sheet. Preventing strike-through of a subsequently applied material is not contemplated, probably because the surface sheet is not porous.

Again, claim 18 recites three layers that may form a trim panel; a cloth, a polyurethane dispersion backing layer and an injection molded plastic substrate. JP 02-143842 does not teach or suggest the presence of this third layer, an injection molded plastic substrate. The Japanese reference discloses a filled polyurethane resin applied to a (non-cloth) surface sheet (2 layers, neither formed by injection molding).

The Examiner further states at page 3 of the Office Action mailed July 26, 2006, that it would have been obvious for one of ordinary skill in the art to have provided the polyurethane dispersion as taught in JP 02-143842 to form the polyurethane foam backing layer in the process of Hus, et al., providing a less costly, more environmentally efficient process. However, it would not have been obvious to provide a polyurethane dispersion as a backing layer to prevent strike-through, since the JP reference does not contemplate the use of an injection molded substrate. Further, the JP reference discloses a dispersion that is foamed with a mixer. Claim 18 as presently amended recites “without frothing”

Claims 18 and 23-24 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Hus, et al. in view of Gribble, et al. (United States Patent Application Publication No.

2004/0109992). Hus, et al. is discussed above, and do not teach that said polyurethane backing is a polyurethane dispersion (applied without frothing) that is applied without the use of adhesives or flame lamination.

Gribble, et al. is silent and does not teach **injection molding a molded plastic substrate on a polyurethane dispersion** without the use of a barrier film applied to said polyurethane backing layer of said cloth. Gribble, et al. simply recites "a substrate", but defines such as the surface to which the **frothed** dispersion is directly applied, in other words only 2 layers. (See Abstract and paragraphs [0001] and [0008] of Gribble, et al.) Gribble, et al. certainly do not teach or suggest **injection molding** onto a polyurethane dispersion nor the elimination of the need for a barrier film to prevent strike-through of the molten plastic through the fabric layer. Molding processes such as shoot-behind (injection molding) are recited at page 3, lines 7-10; page 4, lines 10-15; page 8, lines 13-19 and page 10, lines 10-12 of the specification of the present application. Further, the specification at page 8 lines 16-19 recites that "[a]lternatively, the polyurethane dispersion may be applied to the backside of the cloth **without frothing** to provide a higher density, less permeable back coating. This then provides a more preferred cloth material for "shoot-behind", high pressure molding procedures, such as injection molding."

Thus, neither Hus, et al. nor Gribble, et al. teach or disclose injection molding a plastic substrate behind a "non-frothed" polyurethane dispersion layer. Hus, et al. teaches other means of applying a foam layer against a fabric and Gribble, et al. simply backs a textile substrate with a frothed dispersion, but does not include an injection molded plastic substrate therebehind to form a trim panel or illicits a concern with strike-through of said substrate layer

Appln. No. 10/629,979
Amndt. D dated Nov. 27, 2006
Reply to Office Action of July 26, 2006

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hus, et al. in view of JP-02 143842 and in further view of EP 0 361 856. Hus, et al. and the JP reference are discussed above. EP 0 361 856 appears to be directed at a knitted fabric suitable for covering vehicle seats. The reference is silent as to the use of a polyurethane dispersion as a backing layer for preventing strikethrough.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hus, et al. in view of Gribble, et al. (United States Patent Application Publication No. 2004/0109992) and in further view of EP 0 361 856. All of these references have been discussed above and the combination does not make up for the deficiencies of the primary reference.

Claims 18 and 23-24 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Gribble, et al. (United States Patent Application Publication No. 2004/0109992) in view of Hus, et al. The combination is discussed above.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gribble, et al. (United States Patent Application Publication No. 2004/0109992) in view of Hus, et al. and in further view of EP 0 361 856. All of these references have been discussed above and the combination does not make up for the deficiencies of the primary reference.

In consideration of the amendments to the claims and the remarks hereinabove, Applicants respectfully submit that all claims currently pending in the Application are believed to be in condition for allowance. Allowance at an early date is respectfully solicited.

In the event the Examiner deems personal contact is necessary, please contact the undersigned attorney at (603) 668-6560.

Appln. No. 10/629,979
Amndt. D dated Nov. 27, 2006
Reply to Office Action of July 26, 2006

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account No. 50-2121.

Respectfully submitted,

/steven j Grossman/

Steven J. Grossman
Attorney for Applicant
Reg. No. 35,001
Customer No. 35,001
Grossman, Tucker, Perreault & Pfleger, PLLC
55 South Commercial Street
Manchester, NH 03101
Tel.: (603) 668-6560